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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,244	01/14/2002	Juho Jumppanen	15208	5900

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EXAMINER

MENON, KRISHNAN S

ART UNIT	PAPER NUMBER
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1723

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DATE MAILED: 02/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/047,244

Applicant(s)

JUMPPANEN ET AL.

Examiner

Krishnan S Menon

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-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claims 1-10 are pending in this application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
1. Claims 1-7 and 10 rejected under 35 U.S.C. 103(a) as being unpatentable over JP(H6-227994 in view of Chemical Engineer's Handbook, Perry and Green, p ages 13-53-13-57.

JP(994) discloses a process for separating essential oils comprising steam distillation (page 3, Para 0001) to a mixture containing essential oils and water, contacting with divinyl benzene polystyrene adsorbent or activated carbon, and then desorbing the essential oils (page 3, para 0001) as in instant claim 1 and 2. The water (hydrophilic phase) temperature is at 60° C (page 8, para 0020) as in instant claim 3; the hydrophobic absorbent is synthetic polymer – divinyl benzene cross-linked-polystyrene, activated carbon, etc, as in instant claim 4 and 5. (page 8: 0016,0017); material is

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Cyprus (page 3: claim 2) as in instant claim 6; Cyprus or yellow oils (page 11: 0030) as in instant claim 7; and the process is continuous as in instant claim 10 (page 11: 0029).

JP (994) is silent on recycling the hydrophilic solvent, water, as in claim 1 of the instant application. Recycling of solvent in extractive distillation is a common method taught in a standard textbook of Chemical Engineering, such as Chemical Engineer's Handbook, by Perry and Green, 6th edition (see pages 13-53 through 13-57, and the figures). It would be obvious to one of ordinary skill in the art at the time of invention to recycle the water used in the process. One of ordinary skill in the art at the time of invention could choose to recycle water in the process of JP (994) to recycle solvents in extraction/distillation processes for recovering the solvent and the sensible heat of the solvent as taught by Perry and Green.

2. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP(H6-227994 in view of Chemical Engineer's Handbook, Perry and Green, pages 13-53-13-57 as applied to claim 1 above, and further in view of Chromecek (US 4,962,133).

Claims 8 and 9 have the additional limitations, chromatographic separation of the essential oil (claim 8) and separating Orris oil to myristic acid and irone (claim 9). JP(994) in view of Chemical Engineer's Handbook is silent on the word 'chromatography' as the process even if JP(994) describes adsorption and then eluting/desorbing with another solvent as in chromatography, as in claim 8 of the instant application; and does not teach separating Orris oil to myristic acid and irone. Chromecek (133) teaches use of styrene-divinyl benzene type carrier/adsorbent media for essential oils including orris and rosemary oils (col 4: lines 6-19; col 15 line 26 – col 16 line 16). It would be obvious to one of ordinary skill in the art at the time of invention to choose the teachings of Chromecek (133) and make a chromatographic column to separate the essential oils and further fractionate the essential oils from Orris to its components,

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using the process of JP(994) in view of Chemical Engineer's Handbook teachings to separate the components as taught by Chromecek.

Response to Arguments

Applicant's arguments filed 12/13/02 have been fully considered but they are not persuasive.

The applicants' main argument is that the '994 patent fails to teach recycling of the solvent as in step III of claim 1. The applicant also alludes to the examiner conceding the novelty of the pending claims. On the contrary, the examiner had pointed out that the recycling of the solvent is a standard practice. The examiner has introduced the relevant pages of a standard reference book, Chemical Engineer's handbook, to show this point in this second action.

The applicant further argues that the references fail to suggest the claimed invention, citing the Written Opinion (PCT Chapter II), which also recites the examiner's position in the matter of recycling of the solvent. Moreover, the applicant describes steam distillation as the most common process for obtaining essential oils in page 1 last para of the instant specification, and acknowledges recycling the aqueous phase in the last para of page 2 and 2nd para, page 3, as known process.

The applicant argues that the '994 patent is concerned only about isolating essential oil from an earlier formed mixture. The reference does teach what is claimed in the instant claims in the cited paragraphs.

The applicant argues that recycling step provides unexpected advantages. This is contrary to what is recited in the instant specification. The specification recites "... a substantial amount of essential oil is merely circulated through the system and never extracted as product" in the "known process", ie, steam distillation, etc., during recycle. (See page 3 lines 1-8 of the instant specification.).

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The instant specification reads as if the claimed invention is an improvement over the “known process” of steam distillation etc.

Applicant also argues that the ‘994 patent teaches away from the claimed invention. The examiner fails to understand how this is so. Acknowledgement in the ‘994 patent that steam distillation is a common method, and then teaching how to recover the essential oils from the extracted solvent using adsorbants and then eluting it, is not “teaching away”. Also, this is what the instant specification and claims seem to recite.

Regarding the secondary reference, Chromecek is used only to show the extraction of Orris oil and separation in to its components. The applicant also alluded to the examiner’s inconsistency in using Chromecek as the reference. It may please be noted that the examiner had to retract the original rejection using Reznik (US 6383543) as the secondary reference because of the inadvertent error in the office of noting the priority date in the filing receipt. The priority date overcomes Reznik as a prior art. Chromecek was substituted as the secondary reference because of this error.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S Menon whose telephone number is 703-305-5999. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Wanda L Walker can be reached on 703-308-0457. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Krishnan S. Menon
Patent Examiner
February 14, 2003

Walker
W. L. WALKER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700